In the Claims

The following is a copy of Applicants' claims that identifies language being added with underlining ("___") and language being deleted with strikethrough ("~~---~~"), as is applicable:

1. (Currently Amended) An optical concentrator for a power generation solar cell comprising:

a Fresnel lens mounted over a solar cell to focus sunlight over the solar cell surface when the concentrator is aligned with the sun; and,

a secondary non-imaging concentrating element mounted intermediate the Fresnel lens and the solar cell and operative to redirect sunlight onto the solar cell surface when the concentrator is misaligned;

wherein the solar cell receives edge rays from the Fresnel lens at a periphery of an active surface of the solar cell with the concentrator aligned with the sun without the edge rays being reflected by the second non-imaging concentrating element;

wherein the second non-imaging concentrating element has an exit aperture sized to a dimension equal to the periphery of the solar cell active surface.

2. (Canceled)

3. (Original) An optical concentrator as defined in claim 1 wherein the secondary non-imaging concentrating element has predetermined optical characteristics to redirect edge rays within the periphery of the active surface of the solar cell when the concentrator is misaligned by a predetermined angle.

4. (Original) An optical concentrator as defined in claim 1 wherein the Fresnel lens is a curved Fresnel lens.

5. (Original) An optical concentrator as defined in claim 4 wherein the Fresnel lens is a linear Fresnel lens.

6. (Original) An optical concentrator as defined in claim 4 wherein the Fresnel lens is a circular Fresnel lens.

7. (Original) An optical concentrator as defined in claim 1 wherein the secondary non-imaging concentrating element is a V-trough.

8. (Original) An optical concentrator as defined in claim 7 wherein the V-trough has a contour derived from a straight line fit to a hyperbolic concentrator.

9. (Canceled)

10. (Currently Amended) An optical concentrator for a power generation solar cell comprising:

a Fresnel lens mounted over a solar cell to focus sunlight over the solar cell surface, the Fresnel lens having a convergence angle to direct edge rays within a periphery of an active surface of the solar cell with the concentrator aligned with the sun; and,

a secondary non-imaging concentrating element mounted intermediate the Fresnel lens and the solar cell and operative to redirect sunlight onto the solar cell surface, the secondary non-imaging concentrating element having predetermined optical

characteristics to redirect edge rays within the periphery of the active surface of the solar cell when the concentrator is misaligned by a predetermined angle such that each of the edge rays is redirected using only one corresponding reflection;

wherein the secondary non-imaging concentrating element has an entrance aperture sized to receive edge rays within the convergence angle of the Fresnel lens when the concentrator is misaligned by the predetermined misalignment angle and an exit aperture sized to a dimension equal to the periphery of the solar cell active surface.

11. (Canceled)

12. (New) An optical concentrator as defined in claim 3 wherein the predetermined optical characteristics of the secondary non-imaging concentrating element redirect each of the edge rays within the periphery of the active surface of the solar cell when the concentrator is misaligned by the predetermined angle using only one corresponding reflection.

13. (New) An optical concentrator as defined in claim 10 wherein the Fresnel lens is operative to direct the edge rays to the active surface of the solar cell with the concentrator aligned with the sun without the edge rays being reflected by the second non-imaging concentrating element.

14. (New) An optical concentrator as defined in claim 10 wherein the Fresnel lens is a curved Fresnel lens.

15. (New) An optical concentrator as defined in claim 14 wherein the Fresnel lens is a linear Fresnel lens.

16. (New) An optical concentrator as defined in claim 14 wherein the Fresnel lens is a circular Fresnel lens.

17. (New) An optical concentrator as defined in claim 10 wherein the secondary non-imaging concentrating element is a V-trough.

18. (New) An optical concentrator as defined in claim 17 wherein the V-trough has a contour derived from a straight line fit to a hyperbolic concentrator.